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SOLID PAINTS PRODUCTION METHOD
[Rittai enogu no seizoho]

SHOSABURO MORIZUKA

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INVENTOR	(72): MORIZUKA, SHOSABURO
APPLICANT	(71): SHIKOKU KASEI KOGYO KK.
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1. Name of this invention

Solid paints production method

2. Simple explanation of the figures

Fig. 1 is a perspective view of clay paint drawn with the solid paints produced by the method of this invention. Fig. 2 is a cross-sectional view of the clay paint shown in Fig. 1.

3. Detailed explanation of this invention

This invention pertains to the production method of so called solid paints used for creating arbitrary shapes and figures, such as characters, pictures, patterns, and the like, three-dimensionally with an arbitrary thickness on a paper surface, cloth surface, plate surface, model surface, etc.

With this invention, a pulverized fiber material (fiber length = 0.3 mm or less), such as pulp, wood powder, wool, asbestos fiber, synthetic fiber, etc., is used as the base body, colored with pigment dyes, dried, and made into a powder-like mixture by adding a water-soluble paste material, such as PVA, CMC, starch, etc., or this powder-like mixture is made into a water-containing paste-like material by further adding a suitable amount of water or a synthetic resin-water emulsion and by kneading this mixture sufficiently.

When the solid paints are produced by adding water to the powder-like mixture described above or by preparing these paints into

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a water-containing paste-like materials and used for drawing, the following characteristics, which are not obtainable with the conventional paints of this type, can be provided:

(1) Since a fiber material is used as the base of the paints, the paints have excellent plasticity. Moreover, since the volume changes before and after drying are far smaller than those of other paints containing mineral powder as the base material, as shown in Fig. 1 and 2, the solid clay paint 2 drawn on a plate 1 can thoroughly maintain its original shape created by the initial drawing.

(2) Intertwined fibers can prevent phenomenon such as cracking, crumbling, and peeling, occurring to the shapes created by heaping up the paints having mineral powder as the base material.

(3) Since the base body of the paints is a fiber material, the paints have an excellent water-holding capacity without becoming sticky under rainy weather or highly humid weather.

(4) Since the base body of the paints is a fiber material, the paints are soft and smooth to the finger tips when used as finger paints.

(5) When the paints are prepared into water-containing paste-like materials and filled in plastic tubes, the paints in tubes can be used directly or with finger tips. As a result, tools, such as paint brushes, are not required.

Needless to say that the solid paints produced by the method based on this invention are not only used for clay pictures, but also used for solid map, wall painting, solid model, decorative wall with three-dimensionality, etc.

Operational example 1:

After 10 parts of pigment and 100 parts of water-emulsified liquid containing 10% acrylic resin were mixed in 100 parts of pulverized pulp (fiber length = 0.15 mm or less), kneaded, colored, and dried, 15 parts of CMC were added to this colored dry pulp powder and made into a powder-like product.

By kneading this product after adding an appropriate amount of water, paints of suitable hardness were obtained. When clay paint was drawn with those paints, an excellent result was obtained.

Operational example 2:

After 500 parts of 3% CMC solution were added to 100 parts of colored dried pulp powder prepared in the operational example 1, this mixture was kneaded. As a result, water-containing paste-like solid paints with an excellent quality were obtained.

Operational example 3:

After 500 parts of water-emulsified liquid containing 10% acrylic resin were added to 100 parts of colored dried pulp powder prepared in the operational example 1, this mixture was kneaded. As a result, water-containing paste-like solid paints with an excellent quality were obtained.

As described above, with the method based on this invention, unique and high quality solid paints can be produced easily and economically. Thereby, the obtained solid paints can be used to create clay paints, wall paints, solid maps, solid models, art-decorative objects, etc. which are full of complexity and tastefulness. Moreover, these paints can be used suitably for teaching handicrafts.

Claim(s)

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[Claim 1] Solid paints production method described above which uses a pulverized fiber material (fiber length = 0.3 mm or less), such as pulp, wood powder, wool, asbestos fiber, synthetic fiber, etc., as the base body, colors this base material with pigment dyes, and adds a powdered paste so as to form a powder-like mixture, or further adds an appropriate amount of water to this mixture and kneads the mixture to form a water-containing paste.

Bibliography:

Paints and Coating, Revised edition, M. Kodama et al, Oct, 10, 1955, p. 416 - 418.

Figure 1

第 1 図

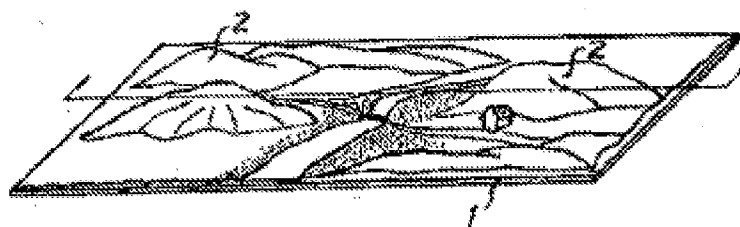


Figure 2

第 2 圖

